Digital Satellite Receiver

3000FTA

USER'S MANUAL

DIGITAL SATELLITE RECEIVER

DVB Digital Video Broadcasting

DiSEqC 1.2

CE

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Safety Precaution

This STB has been designed and manufactured to satisfy the international safety standards. Please read the following safety precautions carefully before operating this receiver.

Main Supply:
Before operating, please check the units operating voltage is 90~250V AC 50/60Hz.

Overload:
Do not overload a wall outlet, extension cord or adapter, neither use damaged
power cord or touch it with wet hand as this may result in electric shock.

Liquid:
The receiver shall not be exposed to dripping or splashing water, and that no objects filled with liquids, such as base, shall be placed on the apparatus.

Ventilation:
Keep the slots on top of the receiver uncover to allow sufficient airflow to the unit. Do not put the receiver on soft furnishings or carpets.Do not expose the receiver to direct light or do not place it near a heater or in humid conditions. Do not stack other electronic equipments on top of the receiver.

Cleaning:
Plug out the receiver from the wall outlet before cleaning. Clean the receiver by a soft cloth or mild solution of washing-up liquid (no solvents).

Connection:
Disconnect the receiver from the mains when you connect it to satellite LNB or disconnet it from LNB. Failure would possibily cause damage to the LNB.

Location:
Put the receiver indoor in order to avoid lightening, raining or sunlight.

Uncover:
Do not remove the cover, to reduce the risk of electric shock.Contact qualified and licensed service personnel to repair the receiver, or contact your dealer.

1. Reference

1.1 General Features

MPEG-2 & Fully DVB Compliant

PLL RF-Modulator UHF 21~69 with PAL B/G,I,D/K

Multi LNB Control by DiSEqC 1.0,1.2,1.3(USALS)

SCPC/MCPC Receivable from C / Ku-Band Satellites

Digital Tuner with Loop-Through

PAL/NTSC Conversion

Variable Aspect Ratio (4:3,16:9) for TV

4-digi 7-segment LED Display

RS232 Port for Updating software and Additional Information

User Friendly OSD Menu with Full Function

Installation by Easy Setup Guide

256 Colors Graphic User Interface

Easy Tuning and Network Search

Multi Language Menu (English / Italian / French / Spanish / Germany / Turkish / Arabic / Russian / Persian)

7-Days EPG (Electronic Program Guide) for On-Screen Channel Information

PIG,Small Screen Picture on EPG

PIP, Picture in Picture

Super fast 800 pages OSD Teletext Supported and VBI Teletext Inserted

8 Favorite Group and Parent Lock Function

100 Satellites, 4000 Channels and 4000 transponders

ZOOM and Multi TImer function

Audio Tone for Tuning signal

6 Kind of Sort function for Channels

1.2 Accessories

- User's manual
- Remote Control Unit
- A/V Cable
- Batteries

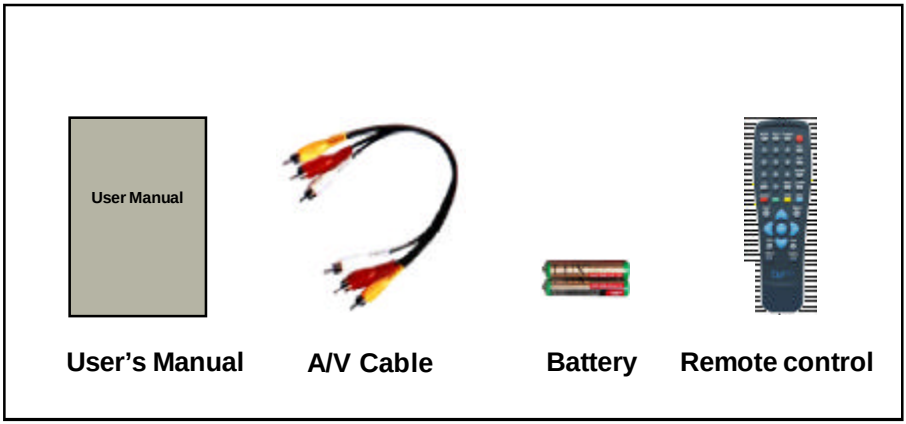


Figure 1. Accessories

2. Basic Function

2.1 Front Panel

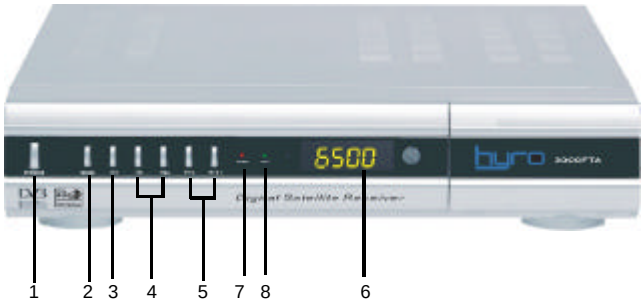


Figure 2. Front Panel

1. Power Button
The POWER button is used to turn the power on or to make it on Standby Mode.

2. MENU Button
Activate the main menu in viewing mode, or exit all menu.

3. OK Button
Activate the highlighted sub menu in menu mode and activate the channel list in viewing mode.

4. Up/Down Button▲/▼
Change channel in viewing mode and move the cursor up/down in menu mode.

5. Left/Right Buttont◀/▶
Increase / decrease the volume in viewing mode and change settings in menu mode

6. Display (4-digi 7-segment)
4-digi displays channel information. In Standby mode the 7-segment displays local time.

7. Power LED
Power indicator

8. Lock LED
Signal Indicator

2.2 Rear Panel

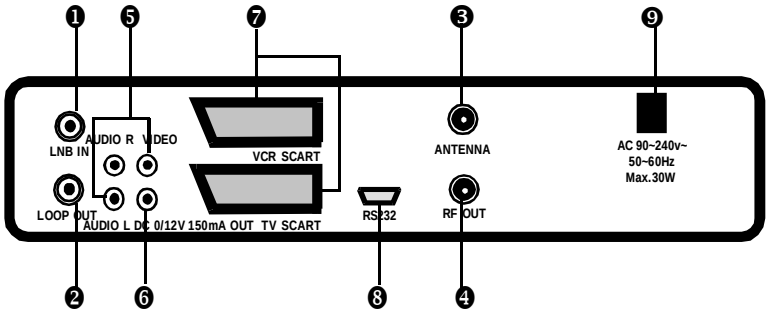


Figure 3. Rear Panel

1. LNB IN 13/18V 500mA Max
Connect the Satellite Dish LNB.

2. LOOP OUT
Output the Dish LNB IN signal.

3. ANT
Connect to TV Antenna

4. RF OUT
Connect to a conventional TV.

5. AUDIO, VIDEO
Connect to Audio/Video of TV. Connect Yellow to Video port, connect Red and
White to Audio Right and Audio Left.

6. 0/12V
Supply 12V DC to other apparatus.

7. TV SCART/VCR SCART
Connect to TV set or VCR with Scart cables.

8. RS232
Connect to serial port of PC for software upgrade.

9. Power Switch
Mains 90~240V AC (Auto selectable), 50~60Hz, Make sure to check the power spec.

2.3 Remote Control Unit(RCU)

You can control this receiver by this remote controller with full function.

1. POWER:
Switch the receiver on or set it to standby mode.

2. MUTE:
Turn the sound On/Off.

3. SAT:
Show the scanned satellite list.

4. NUMERIC KEY (0~9):
Change program or input number.

5. RECAL:
Move to the previous viewed channel.

6. TV/RADIO:
Switch between TV and RADIO.

7. EPG (Electronic Program Guide):
Show the TV/Radio program guide.

8. FAV:
To get favorite channel list you set before.

9. MENU:
Activate main menu or exit to live channel.

10.EXIT:
Exit current menu step by step.

11.CH▲/▼:
Change program.

12.VOL◀/▶:
Change volume in viewing mode.

13.OK:
Confirm the highlighted menu item.
Open the program list.

14. Page, PGUP, PGDN:
Page up/down on menu.

16.AUDIO:
Select or change the Audio.

Figure 4. Remote Control

17.PAUSE:
Freeze the picture.
18.ZOOM:
Picture Zooming function.
19.INFO:
Show the information of the current channel.
press EXIT button to exit this menu.
20.SUB:
Showing Subtitle information if the channels contains.
21. Multi picture
Activate Multi picture menu and select picture
22.A~Z:
Sort channels.
23.TEXT:
Show the teletext content if teletext is transmitted.

3. Installation and Connection

The following diagram shows you the connections among receiver, TV, LNB and other equipment, please read this first if you are not sure abou the connection, and it will guide you to the correct connection.

3.1 Connecting to TV

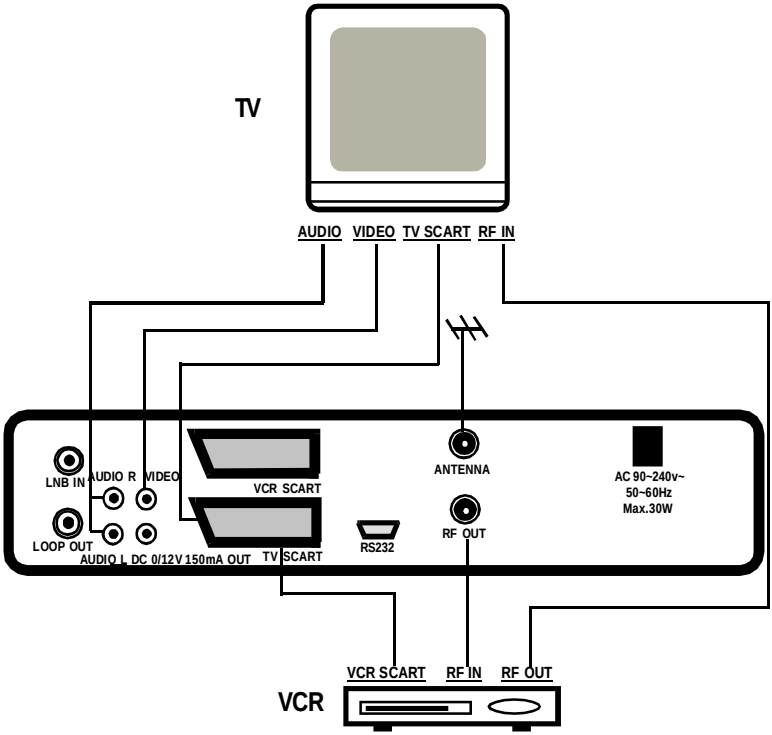


Figure 5. Connecting to TV

3.2 Connecting to Dish LNB

You can connect one fixed dish LNB directly to the LNB IN, or connect at least two dish LNB by DiSEqC Switch, you can also connect to HH mount dish LNB.

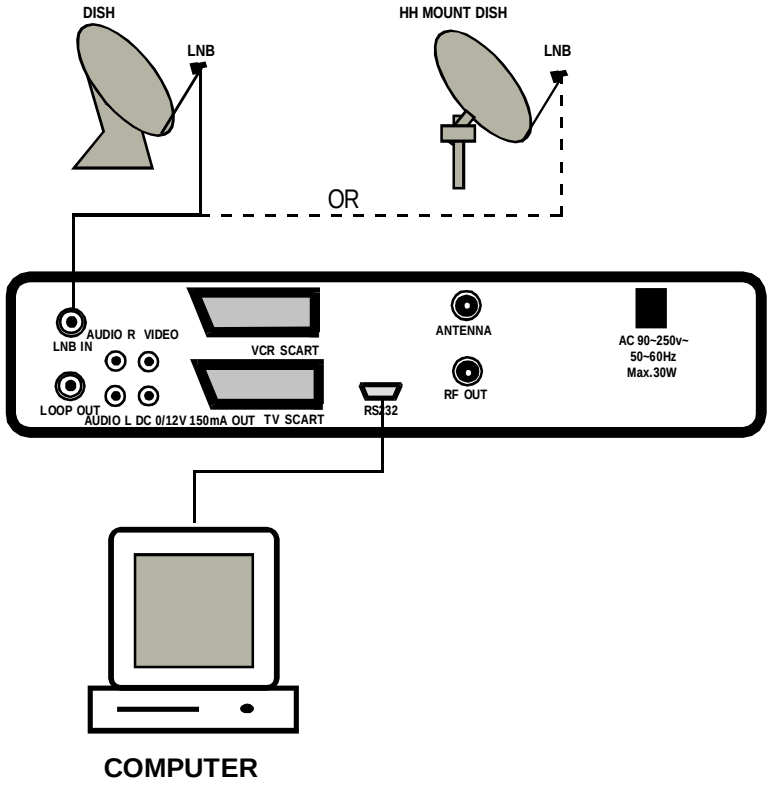


Figure 6. Connecting to Dish LNB

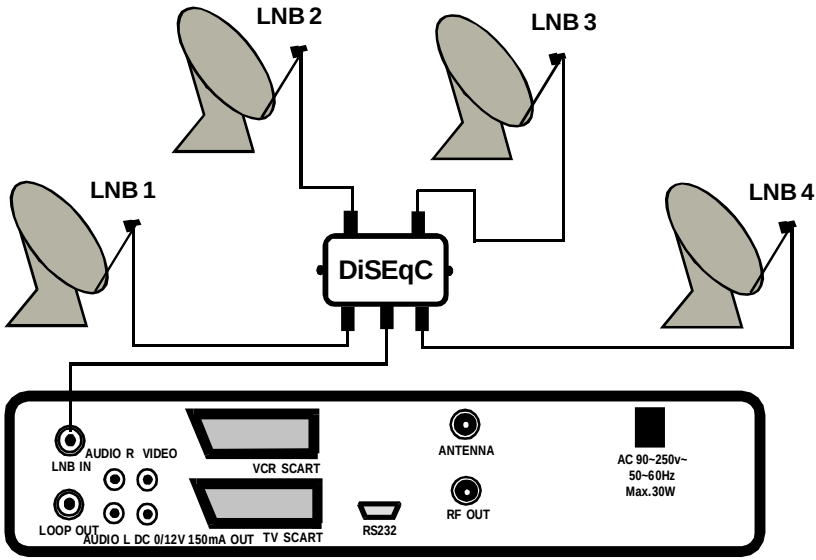


Figure 7. Connecting to Dish LNB

4. Installation and Operation

Ater connecting the receiver to other required equipment, turn on the receiver, there should be no channel information available at the first startup, you need to follow the procedure to setup your receiver to search the channel.

4.1 Menu Guide

During the installation there is a short information showed at the bottom of the menu screen which will guide you to set up, after finishing installation, you can enjoy watching TV or listening to Radio.

--Main Menu--Installation

☛ **Initial Setup**

When turn on the receiver, there will appear a **Setup Wizard** menu for language selection, time setup and search channel. press **OK** button to confirm and proceed.

☛ **Main Menu**

Press **MENU** button to activate main menu, main menu consists of **Antenna Setting**, **Easy Tuning, System Setting**, **Parent Control** and **Timer**

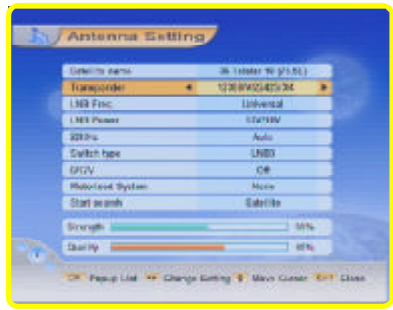
🗁 Use **RIGHT/LEFT** ◀/▶button to select your subject and press **OK** to confirm your selection and enter that sub menu, press **EXIT** button you can return to the previous menu.

☛ **Installation**

Select **Installation,** the sub menu will be displayed, here you can setup antenna, Search Channel, Edite Satellite or Transponder, Reset to Factory Default, Save or load channel list.

☛ **Antenna setup**

Press **OK** button on the **Antenna Setting**, you will get this window.

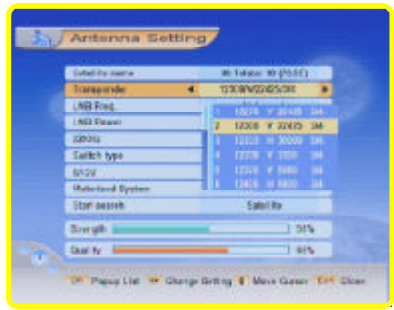


🗁 **Satellite list**

This window shows the pre-stored satellite list, you can change satellite by ◀ /▶, press **OK** to see the satellite list and select satellite.

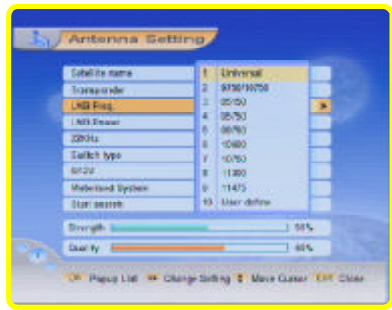
🗁 **Transponder list**

If you change the satellite, the transponder will be changed automatically . You will find the transponder list of selected satellite here by pressing **OK**.



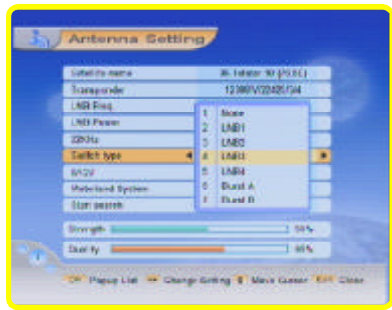
🗁 **LNB frequency and power**

Here you need to check the LNB frequency according to your antenna, set the correct frequency or define yourself, and keep LNB power to be 13V/18V.

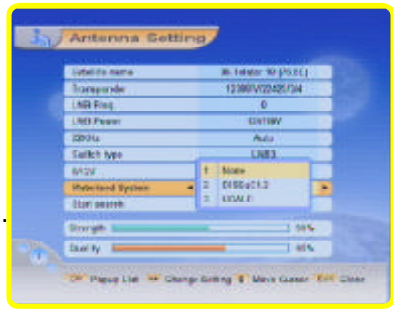


☛ **Switch Type**

If you connect antenna to DiSEqC Switch, you need to set **Switch Type** you need to specify the DiSEqC input to which your selected satellite have been configured. Pressing **OK** you will get the Switch Type list.

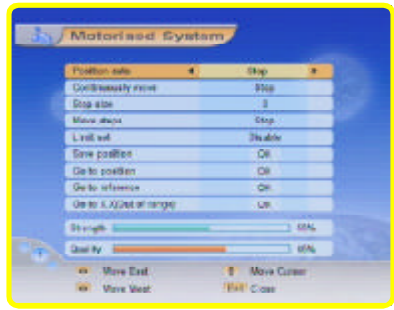


☛ Motorised System



If you connect receiver to DiSEqC 1.2 or DiSEqC 1.3 antenna, set **Motorised system** to **DiSEqC1.2** or **USALS,** you can change the direction of the dish to aim to the satellite you selected through the option.

🗁 USALS



Set **Motorised system** to **USALS,** press OK you will get this window, you can change direction of the dish to aim to the satellite you selected through the option.

🗐 **Position Auto [W/E]**

Press◀ /▶ button, the dish will be motorised to West / East continuously, it will stop untill it find the best signal.

🗐 **Continuously Move West-East**

Push◀ /▶ button, the dish will be motorised to West / East to search the best signal, release the button will stop the moving.

🗐 **Step Size**

Set the moving step.

🗐 **Move Steps**

Move East or West step by step.

🗐 **Limit Set**

Disable or enable West limit or East limit

🗐 **Save Position**

Press **OK** button to save the current position you searched.

🗐 **Go to Position**

Press **OK** button to move the dish to the stored position.

🗐 **Go to Reference**

Press **OK** button to move the dish to 0 position.

🗐 **Go to X.X (9.9)**

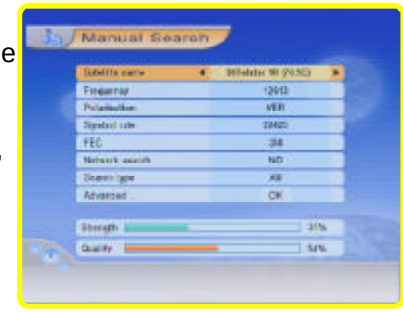
Press OK button to move the dish to exact position of the satellite

🗁 DiSEqC 1.2

Almost same function and operation with USALS, but without Go to X.X

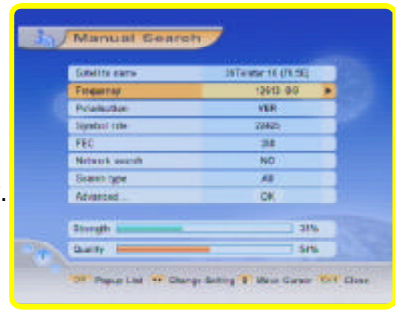
☛ Manual Search

Please select the transponder offered by the satellite that antenna has been configured. Select the LNB frequency, polarisation (Horizontal/Vertical), symbol rate, FEC(1/2, 2/3,3/4,5/6,7/8,Auto), Network search (YES/NO), Search Type (ALL, FTA only, Scramblel), Advanced PID search. The network search will be applied if you want to find more transponders.



🗁 Input Frequency

In this window, you can modify frequency, press the◀/ ▶ button to change frequency, press the numeric button to input frequency.



🗁 Searching

After setup and selection, pressing **OK** will start searching. During searching the TV channel and Radio channel will be listed separately.

🗁 Save channel

Channels will be saved automatically after finishing searching.

☛ Satellite Search

In **Satellite Search** menu, satellite list and transponder list are stored here, select one or more satellite you want to search and press **OK** to mark, then move the cursor to search type--ALL channels, or FTA only, and press **OK** to start search.

☛ **Edit Satellite**

Here you can **Add**, **Delete**, **Rename**, **Move** Satellite. Even you can **hide** satellite, once you select this function, only searched and and stored satellite will be displayed, press **OK** on one satellite you will hide all the channels under this satellite, when you switch channel they will not be displayed, but all channels will still be edited in **Channel Manager**.

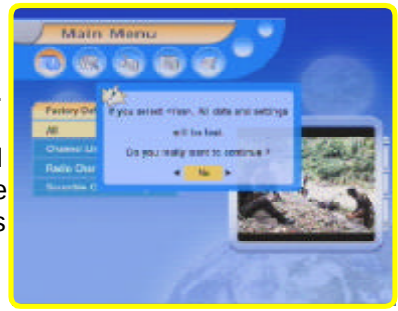
☛ **Edit Transponder**

Here you can **Add**, **Edit**, **Delete** transponder under the satellite you selected. Press red key to switch between satellite and the transponders.

☛ **Factory Default**

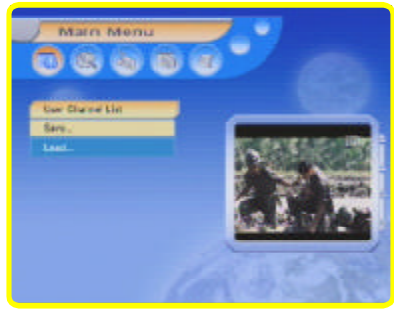
Press **OK** on the **Factory Detault** in the I**nstallation** menu, you will get this window.

You can chose reset type, ALL, Channel list only, Radio channel only, and Scramble channel only. If you chose ALL, the previous setting will be erased, such as parental code, favorite channel etc..



☛ **User Channel List**

In the User Channel List you can save the current channels or load channels you stored.



--Main Menu--Easy tuning

Use ▲/▼ button to select item, use ◀ /▶ to change setting. This function will enable multi satellite search if your receiver connects to DiSEqC Switch. Fast Tuning will enable you to search stored transponder and Auto Tuning will enbable you to search new transponder which is newly released.

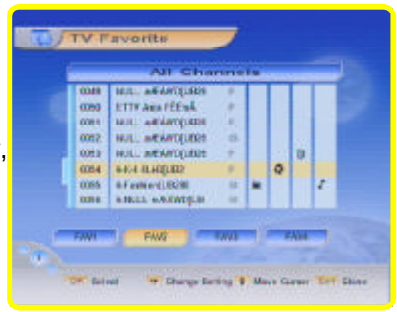
--Main Menu--Channel Manager

Press **Channel Manager** in the **main menu**, you will get this window, here you can edit TV channels and Radio channels, sort channels and upgrade channels via SDX.

Edit TV / Radio channel

In this window you can select channel and play channel, lock/unlock, delete/undelete, move, rename, exchange and skip channel.

TV Favorite and Radio Favorite

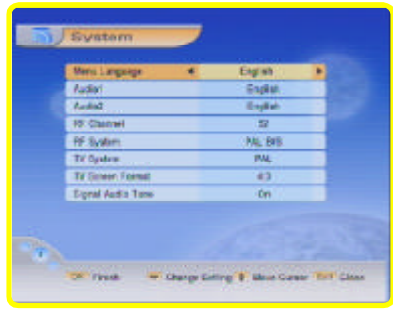


In this window you can select channel and and set them to favorite in different category, there are eight categories for you to edit, and you can also rename the category.

☛ **Sort Channel**

In this menu you can sort the channels in different type, such as language(selectable), FTA, satellite, transponder, favor(selectable) and Alphabet.

--Main Menu--System Setting

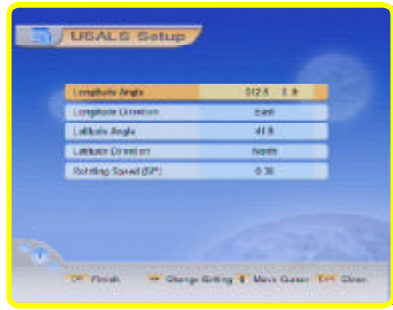


☛ **System**

You can setup the menu language, audio language,RF, TV output and Video output according to the standard of your country. Signal Audio Tune will give you sound indication of the signal strength in Antenna Setting and Manual Search.

☛ **OSD**

You can setup the menu transparency and help information for menu. Time out means the duration of the infomation bar. You can select the way of display of channel list here

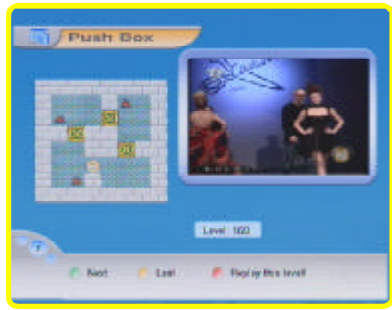


☛ **USALS Setup**

You can setup the Dish position to the satellite you want to search, you need to check the detailed information from internet and input the accurate parameters about your local position. You can setup the rotating speed of the motor.When switching the satellite, it will popup a waiting window, if you do not want this window to appear, you can set this parameter to 0.

☛ **Game**

There are four games stored in the receiver, tetris, snake, pompon and push box, you can play with the remote control by ▲/▼ ◀ / ▶button.



☛ **Facility**

This is the calendar, and it will give you the convenience to check the date of your day.

☛ **Setup Wizard**

There are four steps for you to setup the menu language, audio language, current time, and seach channel or load channel. You can also get this setting when you reset to factory default.

☛ **About STB**

Here is the information about the software version and hardware version. When you need service from the dealer you need to submit this information in order go get the correct and fast after sales service.

--Main Menu--Timer and Lock

In this menu, you can setup the time according to GMT, event timer and setup sleep timer(You can select the time length, or input.). Also you can setup the parenetal lock.

☛ Parent Control

You can select if need the password or not for Installation, Edit Channel and System, also you can change the password, the default password is 0000.

☛ Timer Setup

The default time setup is auto, you can select manual and input by hand, select the time zone of your country and you will get the correct current time which is based on TDT(Time and Data Table) in the stream of the current channel service.

The time you set will be shown on the display panel when you set receiver to standby mode.

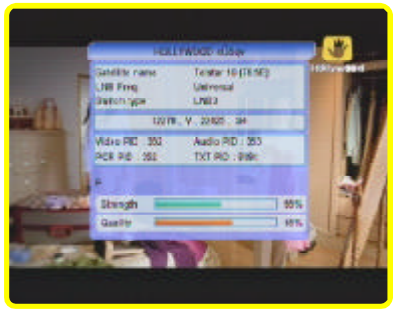
☛ Event Timer

Here you can set your favorite channel to begin broadcasting at future time you set, including both TV and Radio, you can add, edit and delete the event you set.

☛ Sleep Timer

Here you can set Sleep timer and this will enable receiver to sleep automatically according to the time you set.

4.2 Other Useful Information



☛ General Information

In the viewing mode when you press **INFO** button, the info bar will pop up, it contains satellite and channel information, press **INFO** twice you will get the detailed channel infor, press again the info you will get detailed EPG info if there is in channel.

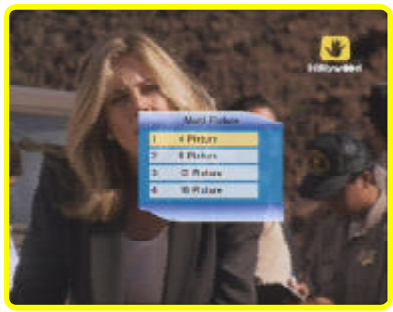
☛ Program Guide

Press **EPG** button on remote control, you can get the electronic program guide if applicable. Press◀/▶to see the headline for each program

You can get the detailed information about that program by pressing **INFO**. Press **TV/RADIO** to change to TV/RADIO.

☛ Favorite Channel List

In viewing mode, you can get the favorite channel group by pressing **FAV,** press◀/▶ to change category. If you did not set favorite channel in advance, it will show with all channel.



☛ F3

In viewing mode, press F3 you will get the multi pictures selection, select one and press ok, multi pictures will be displayed. move up/down, left/right to select channel, press F3 again to get that selected channel pop out and it is living, press OK to display it in full screen or exit to select other channel.

☛ **AUDIO**

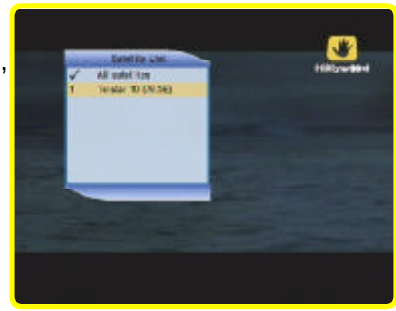
In viewing mode press **AUDIO** button and you will get a menu, you can set the Audio mode here and change.

☛ **Teletext**

Press the TEXT button and you will get a window to view the teletext contents if the teletext is transmitted in the channel. The Teletext content is watchable by OSD even your TV does not support the Teletext.

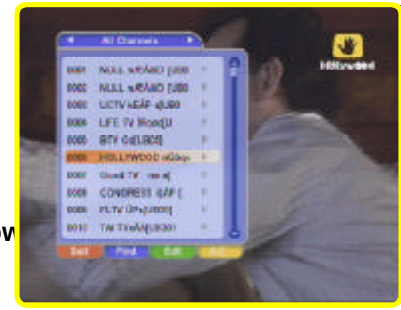
☛ **SAT**

Press **SAT** button on the remote control, you will get this menu which contains the satellites you searched and stored, select one satellite and press **OK**, all channels will be listed under that satellite you selected. Press ◀/▶ to view channel in different type, ALL, FTA, Scrambled.



☛ **Channel List-OK**

In viewing mode press **OK** button and you will get this window. Press Red,Green, Yellow and Blue button to select different category, press **red key** to sort channel**, blue key** to find channel, and **gree key** to edit channel, and a-z sort channel by **yellow key.**



☛ **Recall**

Press Recal button and you can get the viewed history channel.maximum it can list 15 channels that you recently viewed.

5. Additional Information

5.1 Problem Solving

You might meet abnormal working of this STB with various reasons, check the following which may help you.

Problem	Possible causes	What to do
LED on the front panel fail to light up/is not lit.	Mains supply cable is not connected.	Check if the mains supply cable is plugged into the power socket.
No picture or sound.	Satellite dish is not aiming to satellite accurately. No signal or weak signal. The LNB is faulty. The cable is faulty.	Adjust the dish. Check the signal strength indicator in one of the channel search submenus. Check the cable connections,LNB and other equipment connected to LNB & receiver, or adjust dish. Replace the LNB. Replace the cable.
Bad picture/blocking error.	Satellite dish is not aiming to the satellite accurately Signal too strong. Satellite dish is too small. LNB noise factor too high. The LNB is faulty.	Adjust the dish. Connect a attenuator to LNB input. Change to a larger dish. Change LNB with lower noise factor. Replace the LNB.
No startup menu on screen after turning on STB for the first time.	The system is connected by SCARTcables and the TV is not in AV/EXTmode.	Switch the TV to the appropriate AV input.
The remote control is not working.	Battery exhausted. Remote control is not aimed correctly STB is in standby mode.	Change the batteries (both). Aim the remote control at the STB. Check that nothing blocks the front panel. Check if LED indicator on the front panel is showing the time, press the power button to switch off standby mode.
You have forgotten your password.		Contact the dealer or Service Provider. They will help you set it up again.
Poor picture quality orLess channels in scanning.	Low LNB power or singal loss in cable.	Change the LNB power to 14V/19V in Antenna setup menu.

5.2 Technical Specification

Tuner & Demodulator

Frequency Range	950 MHz to 2150 MHz
Input Connector	F-type, IEC 169-24, Female
Signal Level	-25 to -65 dBm
RF Impedance	75 ohm,unbalanced
IF Band width	55 MHz/8Hz(Per 5Msps)
LNB Power &	Vertical : +13 V, 14V +/-5%
Polarisation	Horizontal : +18 V, 19V+/-5% Current : 500 mA Max. Overload Protection
LNB Tone Switch	22KHz+/-2KHz, 0.6Vpp+/-0.2V
DiSEqC Control	Version 1.0/1.2 Compatible, Tone burst A/B
Demodulation	QPSK
Symbol Rate	1~45Ms/s/SCPC,MCPC
FEC Decode	Convolutional Code Rate 1/2, 2/3, 3/4, 5/6 and 7/8 with Constraint Length K=7

MPEG

Transport Stream	MPEG-2 ISO/IEC 13818Transport stream specification
Profile Level	MPEG-2MP@ML
Input Rate	15 Mbit/s Max
Aspect Ratio	4:3, 16:9
Video Resolution	720 x 576(PAL), 720*480(NTSC)
Audio Decoding	MPEG/MusiCam Layer I & II
Audio Mode	Single channel/Dual channel/Joint stereo/Stereo
Sampling	32, 44.1 and 48 KHz

A/V and Data In/Out Connector

TV SCART	CVBS, L, R out
VCR SCART	CVBS, L, R out, AUDIO L, R.
3RCA	AUDIO L, R, VIDEO out.
RS-232C	RS232C D-sub male type.
LNB IF Input	F type, IEC 169-24 Female
LNB IF Output	F type, IEC 169-24 Female

RF-Modulator

RF Connector	75 ohm, IEC169-2, Male/Female
RF Frequency	470MHz-860MHz
Output Channel	CH21-69
TV Standard	PAL B/G, I, D/K Selectable

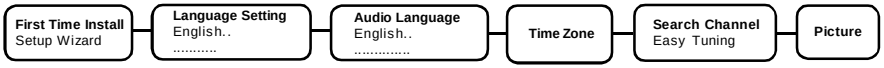
Power Supply

Input Voltage	90 - 240V AC, 50/60 Hz
Power Consumption	Max. 25 W
Protection	Separate internal fuse. Input shall have lightening Protection

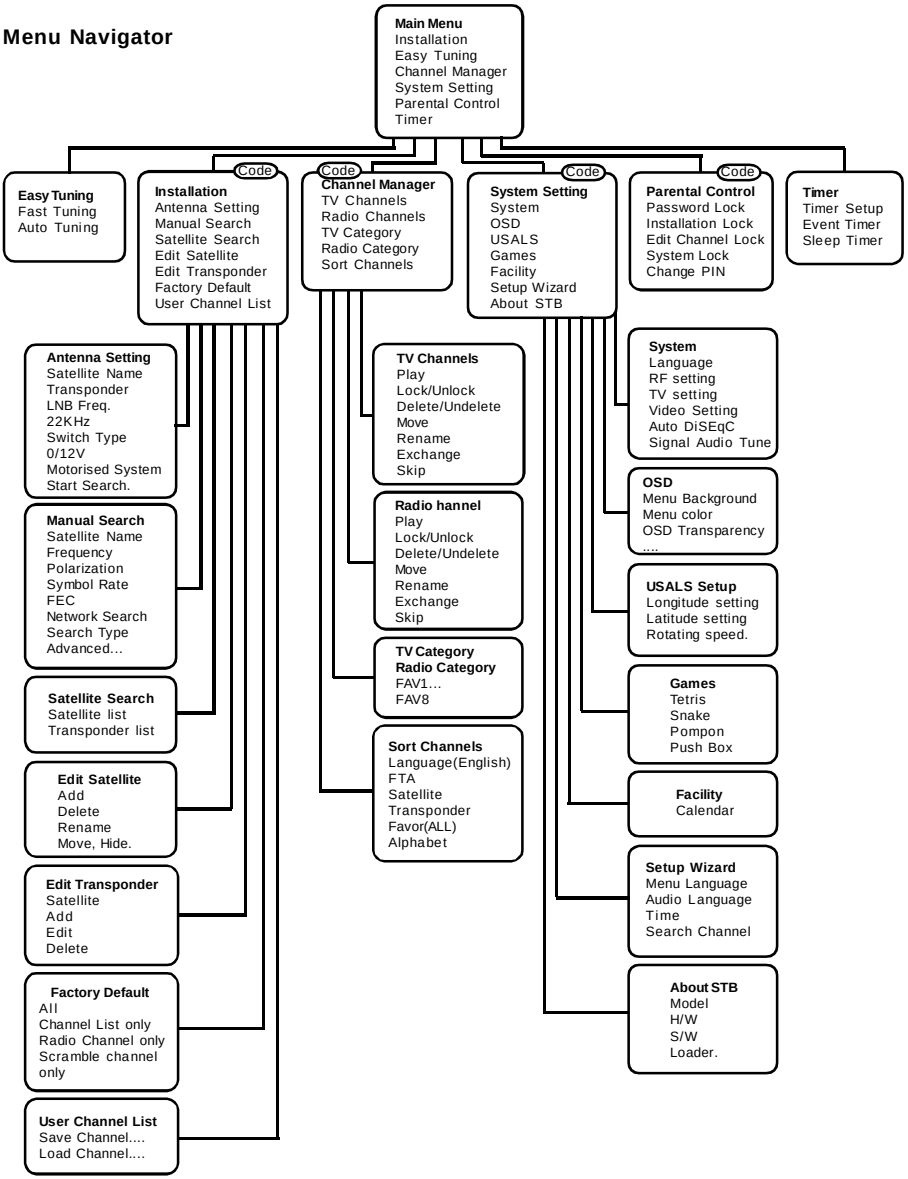
Physical Specification

Size (W x H x D)	280 x 55 x 235 mm
Weight (Net)	Around 2.0 kg
Operating Temp	0℃ to + 40℃
Storage Temp	-40℃ to + 65℃

5.3 Menu Screen Structure



Menu Navigator



5.4 Glossary

Antenna
A device that collects and radiates electromagnetic waves. Includes a satellite dish and abroadband antenna.

DiSEqC
DiSEqC(Digital Satellite Equipment Control)system, it is a communication bus between satellite receivers and peripheral equipment using only the existing coaxial cable.

DVB
The Digital Video Broadcast group was created to establish a technical framework for the introduction of digital video broadcasting systems.

LNB (low-noise block converter) or LNBF
An electronic unit mounted on the satellite dish. It receives the signals reflected by the dish and converts them to signals that can be used by the digital satellite receiver.

GHz
The prefix giga means milliard, and Hertz means cycles per second. Signals in the GHz range are often called microwaves.

MHz
The prefix mega means million, and Hertz means cycles per second.

MPEG
Moving Picture Experts Group. Established by the International Standards Organisation to provide the basis for a picture coding and compression system.

Forward Error Correction(FEC)
A system of error control for data transmission.

PID(Packet Identifier)
A set of numbers that idenitifies transport stream packets containing data from a single data stream.

Polarisation
Polarisation allows several programmes to be fit into the same frequency band. The signals from a satellite are transmitted either with linear (vertical or horizontal) polarisation or circular (right or left) polarisation.

QPSK(Quaternary Phase Shift Keying)
Phase-shift keying in which four different phase angles are used.

Transponder
An automatic device that receives, amplifies and retransmits a signal on a different frequency.

Symbol rate
Speed of the digital transmission

RF
Radio frequency (known as HF in some countries).

RGB
Red, Green, Blue. Colour signals are routed in separatecables in order to provide a high quality TV picture.

Scrambled TV programme
Some TV programmes are transmitted in scrambled form.

SERIAL RS 232
A serial communication standard data port.

SCART
A 21-pin connector used for connection of the receiver,VCR and TV. Also named Euroconnector or Peritel connector.

S/PDIF
Sony/Philips Digital Interface Format. Digital audio output.

RCA
Coaxial connector used to connect the receiver to an external amplifier.

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Digital Satellite Receiver FTA